Lipid-polymer hybrid nanoparticles loaded with N-acetylcysteine for the modulation of neuroinflammatory biomarkers in Human iPSC-Derived PSEN2 (N141I) Astrocytes as a model of Alzheimer's Disease

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Supplementary data

Figures

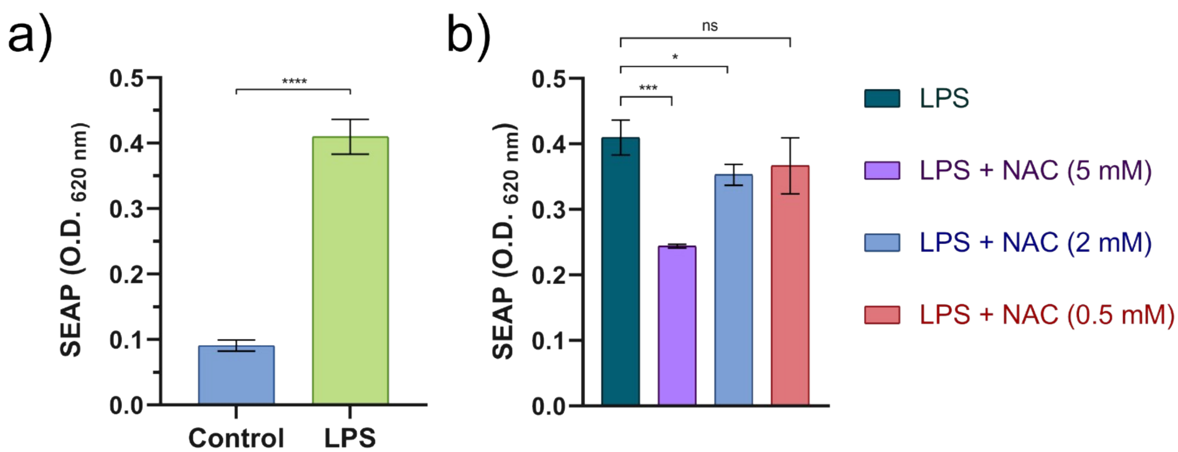

Figure S1. Secreted embryonic alkaline phosphatase (SEAP) activity detected by QUANTI-Blue™. a) SEAP detection from CCD-1112Sk human fibroblasts stimulated with LPS (1 ng/mL) for 24 h, b) Effect of different concentrations of NAC for the inhibition of SEAP production in human fibroblasts. Vertical bars represent the standard deviation of the mean (±), n = 3 per group. Two-tailed Student's t analysis with $p < 0.05$.

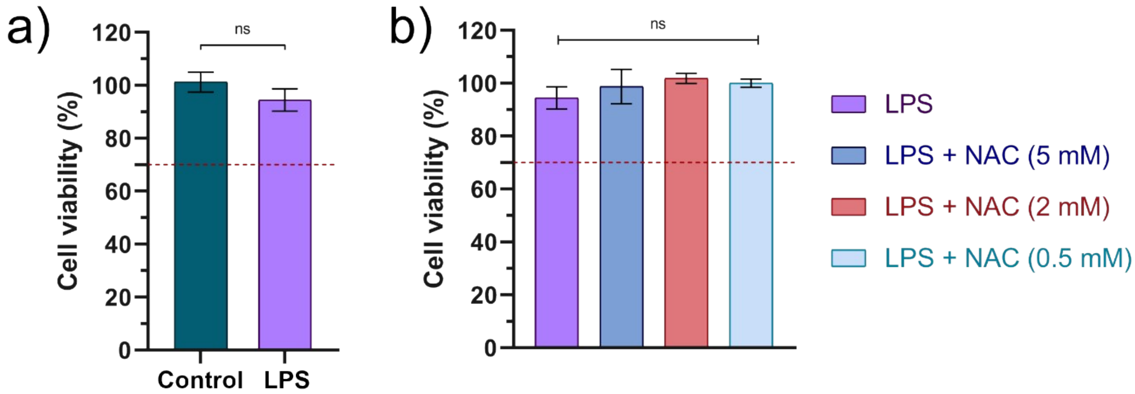

Figure S2. Cell viability in an inflammation model with CCD-1112Sk human fibroblasts stimulated with LPS. a) Percentages of cell viability after stimulation with LPS (1 ng/mL) for 24 h, b) cell viability after stimulation and the application of different concentration of free NAC. Vertical bars represent the standard deviation of the mean (±), n = 3 per group. One-way ANOVA using Tukey's post hoc analysis with $p < 0.05$.

Tables

Table S1. Primer sequences and characteristics of genes to be evaluated by qPCR in iPSC HA-PSEN2.

Gen	Gene ID	Sequence	Amplicon length (bp)	Reference
GFAP	2670	F: TGGGAGCTTGATTCTCAGCA R: CCTGGGCTTGACCTCTCTGTA	122	(Joe, Jeong & Cho, 2015)
S100β	6285	F: GGAGACGGCGAATGTGACTT R: GAACTCGTGGCAGGCAGTAGTAA	72	(Jung, 2016)
IL-1β	3553	F: CTCTGCCTCTTTGTGTGTATGC R: GAGGGAAGGAGAGGGAGAGA	74	(Adamik et al., 2013)
IL-6	3569	F: GGAGACTTGCCTGGTGAAA R: CTGGCTTGTTCCTCACTACTC	99	(Robinson et al., 2020)
APP	351	F: TGTGTGCTCTCCCAGGTCTA R: CAGTTCTGGATGGTCACTGG	80	(Varhaug et al., 2017)
GAPDH	2597	F: CTCCTCCACCTTTGACGCTG R: ACCACCCTGTTGCTGTAGCC	206	(Mathew et al., 2018)

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